



STID 5552

June 15, 1998

Pamela J. Evans
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

RE: Subsurface Investigation Report
489 43rd Street
Oakland, California 94609
WA Job 138-1231-02

Dear Ms Evans:

Weiss Associates (WA) prepared this letter report to present the results of the subsurface investigation for the subject property located at 489 43rd Street, Oakland, California (Figure 1). WA performed the subsurface investigation according to the workplan WA submitted to your office on behalf of the property owner, Ronn Simpson, on September 18, 1996, and approved by your office on October 7, 1996. This report reflects WA's current understanding of site history and includes a summary of the subsurface investigation. This report is divided into the following sections: Site Description, Objective, Subsurface Investigation, and Results.

Site Description

The property is located at 489 43rd Street in Oakland, California. The subject site consists of a commercial building occupying a corner lot. The building is adjacent to the sidewalk on 43rd Street and has a frontage on Telegraph Avenue. WA understands that a former underground storage tank (UST) was located under the north sidewalk of 489 43rd Street, about 90 feet east of intersection of 43rd Street and Telegraph Avenue in Oakland. The UST was reportedly installed prior to 1975 to fuel delivery vehicles for the Liberty French Baking Company, a prior occupant of the subject site. The UST was removed by Acutite Environmental Engineering in September 1995. There is a reported release from the former USTs located at 490 43rd Street that is across the street and upgradient of the subject site. The 490 43rd Street USTs reportedly contained gasoline and paint thinner. Figure 2 shows the site layout.

contents

Objective

WA proposed to auger an 11-foot deep boring downgradient of the UST near 489 43rd street as shown on Figure 2. The objective was to collect soil and ground water samples to assess if the UST was a source of petroleum hydrocarbons to the subsurface and if petroleum hydrocarbons from former USTs at 490 43rd Street, the property adjacent and upgradient of 489 43rd Street, have migrated onto the site.

Subsurface Investigation

On May 29, 1998, WA drilled 1 borehole on the downgradient side of the subject UST and advanced the borehole to groundwater (Figure 2).

Permits

Prior to conducting the subsurface investigation, WA contacted Alameda County Public Works Agency to obtain a permit for the fieldwork. Alameda County Public Works Agency issued Drilling Permit 98WR198. WA also contacted Underground Service Alert (USA) and was issued ticket number 134037 for installing the boring. Additionally, WA retained a private underground line locating company, Subtronic Corporation of Concord, to clear the bore hole location prior to the start of work.

Borehole Drilling and Subsurface Sampling

Gregg Drilling and Testing Inc., of Martinez, California performed the drilling, under the supervision of a WA engineer. A WA field geologist logged the borehole and collected the environmental samples. The boring was drilled to a total depth of 12 feet below ground surface (bgs), using a limited access direct-push sampling device.

Soil samples were collected by hydraulically advancing a 1.5-inch diameter carbon steel sampler lined with a polyethylene tube to the desired depth and removing it for sample collection. Soil cores were collected continuously. The collected soil cores were screened visually by the field geologist for staining, odors or other indications of contamination. The field geologist, using the Unified Soil Classification System (USCS), lithologically classified the soil cores. Based on the field observations, one soil sample from the boring core was selected for laboratory analysis (a second soil sample was collected and submitted to the laboratory but was not analyzed). Due to the absence of any indications of contamination in the borings, the deepest unsaturated soil sample, collected from approximately 10 feet bgs, was chosen for analysis. To collect the samples, the polyethylene tubes were cut to provide 6-inch long soil samples. The ends of the tubes were covered with Teflon sheets and capped with tight fitting plastic caps. The samples were given identification (ID) numbers and placed in an iced cooler for transport to the laboratory under chain-of-custody procedures. The chain-of-custody indicated that the sample collected from 5-ft bgs was to be held for possible future analysis and the 10-ft bgs sample was to be analyzed immediately.

The ground water table was encountered at 11.2 feet bgs. A 1-inch diameter slotted PVC screen was placed in the boring. A clean 1-inch stainless steel bailer was used to purge the boring and collect the grab groundwater sample. The ground water collected in the bailer was decanted into

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clean sample containers with preservative. The sample containers were cleared of headspace and capped. The sample was given an ID number and was placed in an iced cooler for transport to the laboratory under chain-of-custody procedures.

The downhole drilling equipment was steam cleaned prior to arrival on-site and at the completion of the work. Upon completion of the fieldwork, the boring was grouted to the surface with a 3-5% bentonite/cement grout and finished to match the existing surface with cement.

Lithology Encountered

The boring was located inside the building in the downgradient direction of the former UST. The surface of the boring was approximately 6 inches of concrete. Soils beneath the concrete slab consisted of a 8-9 foot clayey-silt layer that is possibly fill soil and a deeper native clayey-silt layer that began at about 9-ft-bgs (the thickness of the second layer is not know because the borings where not advanced through the layer). Sand and angular pebbles to 0.3-inch diameters were noted in the boring log. Groundwater was encountered at 11.2 feet bgs and the boring was advanced to total depth of 12 feet bgs. No visual or olfactory evidence of contamination was observed in the unsaturated soil samples. Groundwater encountered at 11.2 feet bgs had a distinct chemical odor. The boring log for the borehole is included as Attachment A.

Results

The soil and groundwater samples were submitted under chain-of-custody procedures to McCampbell Analytical Inc., a State of California Department of Health Services approved laboratory. Soil sample SB-01-5.0 collected at 5-ft bgs was placed on hold and not analyzed. The 10-ft bgs soil sample, ID number SB-01-10.0, and groundwater sample, ID number WS-01-11.2, were analyzed for the following COCs: Total Petroleum Hydrocarbons as Gasoline (TPH-G), Total Petroleum Hydrocarbons as Paint Thinner (TPH-PT), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), and methyl tertiary-butyl ether (MTBE) by modified EPA Method 8015 and EPA Method 8020. Table 1 presents the analytical results.

Table 1. Borehole Sample Results for 489 43rd Street, Oakland, California.

Sample ID	Sample Type	Sample Depth (ft bgs)	TPH-G	B	T	E	X	MTBE	TPH-PT
SB-01-05.0	Soil	5.0	na	na	na	na	na	na	na
SB-01-10.0	Soil	10.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<1.0
WS-01-11.2	Ground Water	11.2	18,000 ^a	2,400	28	840	85	<350	8,800 ^a

Notes:

na = not analyzed

<"x" = means not detected above the reporting limit of "x"

a = laboratory noted that unmodified or weakly modified gasoline was significant, a lighter than water immiscible sheen is present, and the liquid sample contained greater than ~5 vol. % sediment

Soil results are given in mg/kg

Groundwater results are given in ug/L

mg/kg = parts per million (ppm)

ug/L = parts per billion or (ppb)

The soil sample was reported to have no concentrations of COCs above the laboratory-reporting limit.

The groundwater sample was reported to have a TPH-G concentration of 18,000 ppb, a benzene concentration of 2,400 ppb, and a TPH-PT concentration of 8,800 ppb. The laboratory indicated that the TPH-G and TPH-PT results included a large fraction of an unmodified or weakly modified gasoline. Due to the interference from the TPH-G concentration, the laboratory had to raise the MTBE reporting limit to 350 ppb.

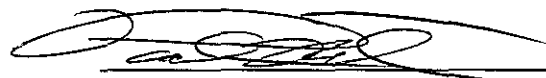
Copies of the laboratory report and chain-of-custody are included as Attachment B.

Pamela Evans
 Alameda County Health Care Services Agency
 June 15, 1998

WA is prepared to answer any questions you may have regarding this report. Please call Paul Nuti at (510) 450-6164 if you have any questions, or would like to discuss any aspect of this report.

Weiss Associates work for the Ronn Simpson at 489 43rd Street, Oakland, California was conducted under my supervision. To the best of my knowledge, the data contained herein are true and accurate and satisfy the scope of work prescribed by the client for this project. The data, findings, recommendations, specifications or professional opinions were prepared in accordance with generally accepted professional engineering practice. WA makes no other warranty, either expressed or implied.




 Paul M. Nuti, P.E.
 Registered Civil Engineer
 CA License No. C 57524

6-15-98
 Date

Enclosures: Figure 1. Site Location – 489 43rd Street, Oakland, California
 Figure 2. Soil Boring Location - 489 43rd Street, Oakland, California
 Attachment A – Soil Boring Log
 Attachment B – Analytical Laboratory Report and Chain-Of-Custody

cc: Mr. Ronn Simpson, P.O. Box 3090, Berkeley, California 94703

FIGURES



San Jose/Oakland [CA]
Map data Copyright © Etak, Inc., 1984-1995. All rights reserved.
Microsoft Automap Streets Copyright © and (p) 1988-1995 Microsoft Corporation

Figure 1 Site Location - 489 43rd Street, Oakland, California

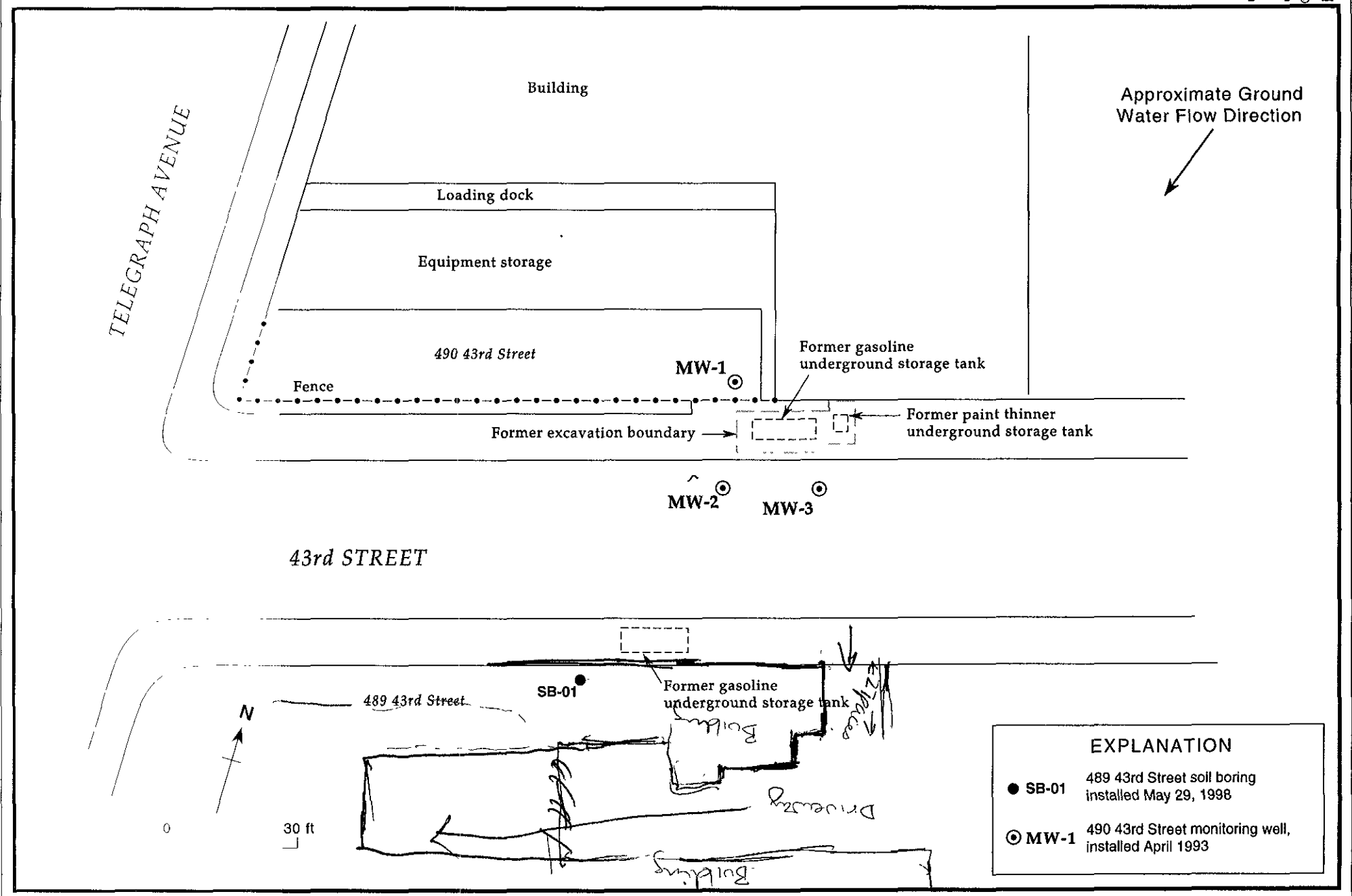
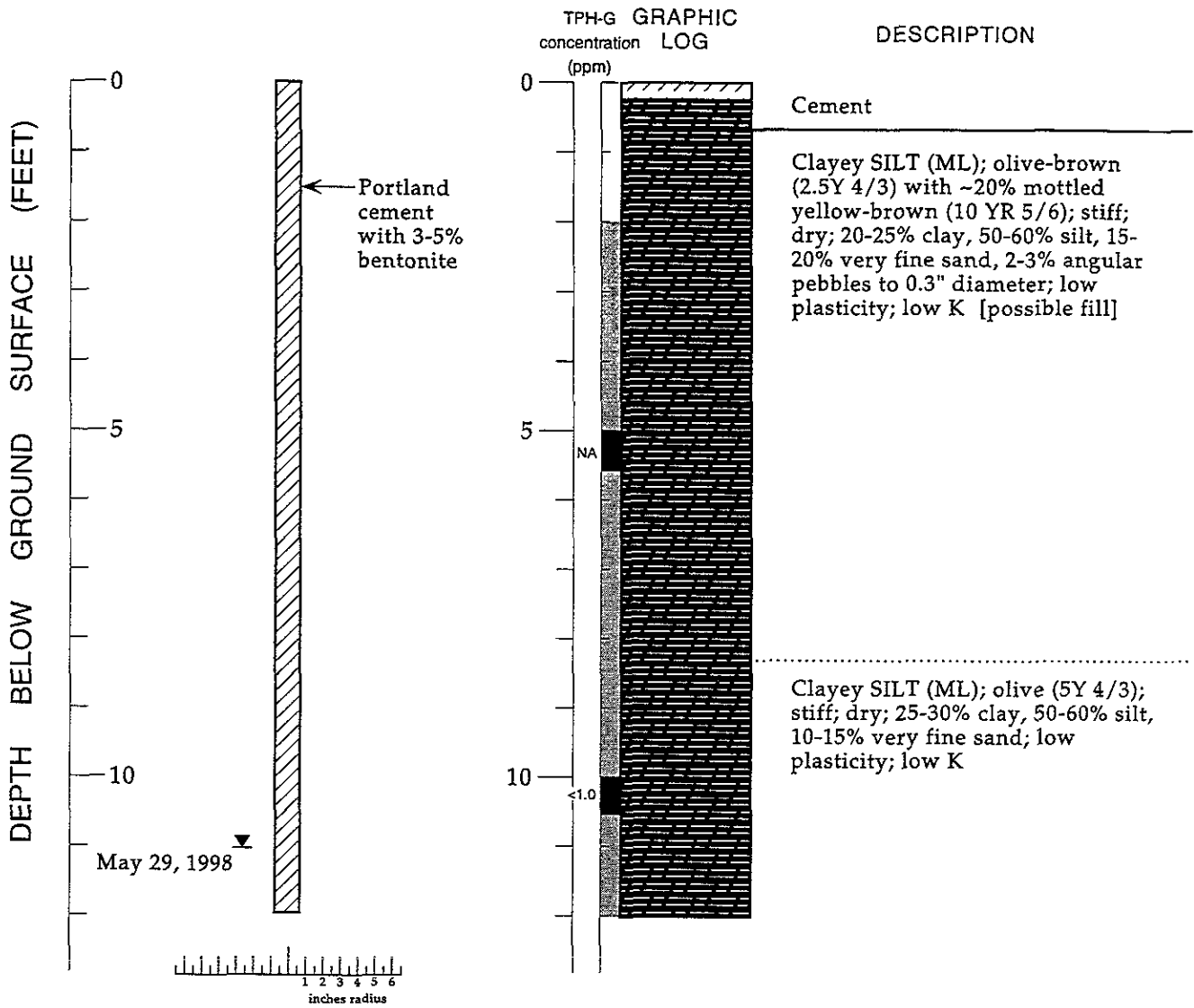


Figure 2 Soil Boring Location - 489 43rd Street, Oakland, California

ATTACHMENT A

SOIL BORING LOG

SOIL BORING SB-01



EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- · — Contact (dotted where approximate)
- ? - ? - Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Erik Nielsen
 Supervisor: Paul Nuti; PE C57524
 Drilling Company: Gregg Drilling, Martinez, CA
 License Number: Lic #C57-485165
 Driller: Dan Cooper
 Drilling Method: Direct Push
 Date Drilled: May 29, 1998
 Type of Sampler: Large bore (1 5" ID)
 TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015
 NA: Not analyzed

Boring Log Details - Soil Boring SB-01 - 489 43rd Street, Oakland, California

ATTACHMENT B

LABORATORY ANALYTIC REPORT AND CHAIN-OF-CUSTODY



McCAMPBELL ANALYTICAL INC.

110 Second Avenue South, #D7, Pacheco, CA 94553
Telephone : 925-798-1620 Fax : 925-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

Weiss Associates 5500 Shellmound Street Emeryville, CA 94608	Client Project ID: #138-1231-02; 489 43 rd St. Oakland	Date Sampled: 05/29/98
		Date Received: 06/01/98
	Client Contact: Paul Nuti	Date Extracted: 06/01/98
	Client P.O:	Date Analyzed: 06/01/98

06/08/98

Dear Paul

Enclosed are:

- 1). the results of 2 samples from your #138-1231-02; 489 43rd St. Oakland project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director



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Weiss Associates 5500 Shellmound Street Emeryville, CA 94608	Client Project ID: #138-1231-02; 489 43 rd St. Oakland	Date Sampled: 05/29/98
	Client Contact: Paul Nuti	Date Received: 06/01/98
	Client P.O:	Date Analyzed: 06/01/98
		Date Extracted: 06/01/98

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*
EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) [†]	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
89842	SB-01-10.0	S	ND	ND	ND	ND	ND	ND	98
89843	WS-01-11.2	W	18,000,a,h,i	ND<350	2400	28	840	85	103
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W		50 ug/L	5.0	0.5	0.5	0.5	0.5	
	S		1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg and all TCLP and SPLP extracts in ug/L

† Coluted chromatogram, sample peak coelutes with surrogate peak

The following descriptions of the TPH chromatogram are courtesy of Pacific and McCampbell Analytical. Pacific is not responsible for the interpretation of unmodified or weakly modified gasoline. Significant: a) heavier gasoline range compounds are significant; b) lighter gasoline range compounds (the most mobile fraction) are significant; c) gasoline range compounds having broad chromatographic peaks are significant; d) gasoline range compounds having broad peaks that does not appear to be derived from gasoline (?); e) one to a few isolated peaks present; f) strongly aged gasoline or diesel range compounds are significant; g) lighter than water immiscible liquid is present; h) liquid sample that contains greater than ~5 vol% sediment; i) no recognizable pattern.



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Weiss Associates 5500 Shellmound Street Emeryville, CA 94608	Client Project ID: #138-1231-02; 489 43 rd St. Oakland	Date Sampled: 05/29/98
	Client Contact: Paul Nuti	Date Received: 06/01/98
	Client P.O:	Date Extracted: 06/01/98
		Date Analyzed: 06/01/98

Paint Thinner Range (C9-C12) Volatile Hydrocarbons as Paint Thinner*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(pt) ⁺	% Recovery Surrogate
89842	SB-01-5-0 ^{Par} 10.0	S	ND	98
89843	SB-01-10-0 ^{Par} 11.2	W	8800,a,h,i	103
	Error in client ID continued w/ lab on 6-12-98			
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W		50 ug/L	
	S		1.0 mg/kg	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP & SPLP extracts in ug/L.

⁺ cluttered chromatogram, sample peak coelutes with surrogate peak

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant (aged gasoline); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant, biologically altered gasoline; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) greater than water immiscible stream is present; i) liquid sample that contains greater than ~5 vol % sediment; j) no recognizable pattern

QC REPORT FOR HYDROCARBON ANALYSES

Date: 06/01/98-06/02/98

Matrix: WATER

Analyte	Concentration (mg/L)			Amount Spiked	% Recovery		RPD
	Sample (#89760)	MS	MSD		MS	MSD	
TPH (gas)	0.0	93.3	93.6	100.0	93.3	93.6	0.3
Benzene	0.0	10.5	11.0	10.0	105.0	110.0	4.7
Toluene	0.0	10.5	10.9	10.0	105.0	109.0	3.7
Ethyl Benzene	0.0	10.6	11.0	10.0	106.0	110.0	3.7
Xylenes	0.0	32.1	33.4	30.0	107.0	111.3	4.0
TPH(diesel)	0	147	152	150	98	102	3.3
TRPH (oil & grease)	0	22500	22800	23700	95	96	1.3

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

QC REPORT FOR HYDROCARBON ANALYSES

Date: 06/01/98

Matrix: SOIL

Analyte	Concentration (mg/kg)			Amount Spiked	% Recovery		RPD
	Sample (#87566)	MS	MSD		MS	MSD	
TPH (gas)	0.000	1.996	2.022	2.03	98	100	1.3
Benzene	0.000	0.214	0.204	0.2	107	102	4.8
Toluene	0.000	0.230	0.220	0.2	115	110	4.4
Ethylbenzene	0.000	0.216	0.206	0.2	108	103	4.7
Xylenes	0.000	0.638	0.612	0.6	106	102	4.2
TPH(diesel)	0	300	301	300	100	100	0.3
TRPH (oil and grease)	0.0	30.3	30.2	30	101	101	0.3

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

11832 X wa 33

WA Weiss Associates
 Environmental and Geologic Services
 5500 Shellmound Street, Emeryville, CA 94608
 Phone: 510-450-6000 Fax: 510-547-5043
 AquaTerra Associates Incorporated, DBA

Please send analytic results and a copy of the signed chain of custody form to:

Paul Nuti

Project ID: 138-1231-02

Site Name: 489 43rd St. Oakland

Lab Personnel:

PLEASE INCLUDE QA/QC DATA IF BOX IS CHECKED.

- 1) Specify analytic method and detection limit in report.
- 2) Notify us if there are any anomalous peaks in GC or other scans.
- 3) ANY QUESTIONS/CLARIFICATIONS: CALL US.

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: EDN

Laboratory Name: McCampbell Analytical Inc.

No. of Containers	Sample ID	Container Type ¹	Sample Date	Sample Time	Vol ²	Filter ³	Refrig ⁴	Preservative (specify)	Analyze for	Analytic Method	Turn ⁵	COMMENTS
	<u>SB-01-5.0</u>	<u>P</u>	<u>5-29-98</u>	<u>1345</u>			<u>Y</u>	<u>No</u>			<u>Hold</u>	<u>Please call if</u>
	<u>SB-01-10.0</u>	<u>P</u>	<u>5-29-98</u>	<u>1400</u>			<u>Y</u>	<u>No</u>	<u>TPH-Gas</u>	<u>8015</u>	<u>N</u>	<u>good have any</u>
									<u>TPH-Paint Thinner</u>	<u>8020</u>		<u>questions</u>
									<u>BTEX</u>	<u>8020</u>		
									<u>MTBE</u>			
<u>54</u>	<u>WS-01-11.2</u>	<u>V</u>	<u>5-29-98</u>	<u>1525</u>	<u>40ml</u>	<u>N</u>	<u>Y</u>	<u>HCl</u>	<u>TPH-Gas</u>		<u>N</u>	<u>89841 H</u>
									<u>TPH-Paint Thinner</u>			<u>89842</u>
									<u>BTEX</u>			<u>89843</u>
									<u>MTBE</u>			

1 [Signature]
Released by (Signature), Date, Time

1 [Signature]
Affiliation

2 [Signature] 5/29/98
Received by (Signature), Date, Time

2 Weiss Assoc.
Affiliation

3 [Signature] 6/1
Released by (Signature), Date, Time

3 WA
Affiliation

4 James McLean 6-1 910
Shipping Carrier, Method, Date, Time

4 Aero Del.
Affiliation

5 James D McLean 6-1-98 1005 Am
Released by (Signature), Date, Time

5 Aero Del.
Affiliation

6 [Signature] 6-1-98 10:05
Received by Lab Personnel, Date, Time

6 MAT (510) 798-1620
Affiliation, Telephone

[Signature] yes
Seal intact?

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other.
 2 Cap Codes: PT = Plastic, Teflon Lined 2 = Volume per container, 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround [N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out)]
 ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

ICE GOOD CONDITION HEAD SPACE ABSENT PRESERVATION APPROPRIATE CONTAINERS

VOAG	O&G	METALS	OTHER
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